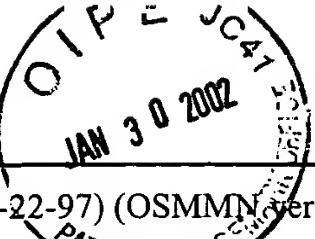


197319US



PTO-850-(Rev. 09-22-97) (OSMMN version)

Count # 1**INTERFERENCE-INITIAL MEMORANDUM**

BOARD OF PATENT APPEALS AND INTERFERENCES: An interference is found to exist between the following cases:

This interference involves 2 Parties

**EXAMINERS INSTRUCTIONS** - This form need not be typewritten. Complete the items below and forward to the Group Clerk with all file including those benefit of which has been accorded. The parties need not be listed in any specific order. Use a separate form of each count.

(See MPEP 2309.02)

BOARD OF PATENT APPEALS AND INTERFERENCES: An interference is found to exist between the following cases:

| 1. PARTY      | APPLICATION NO. | FILING DATE  | PATENT NO., IF ANY | ISSUE DATE, IF ANY |
|---------------|-----------------|--------------|--------------------|--------------------|
| Grooms et al. | 09/905,683      | 16 July 2001 |                    |                    |

If application has been patented, have maintenance fees been paid? Yes No Maintenance Fees not due yet

The claims of this party which correspond to this count are: 59-110.

The claims of this party which do not correspond to this count are: None

\*Accorded the benefit of:

| COUNTRY | APPLICATION NO. | FILING DATE    | PATENT NO., IF ANY | ISSUE DATE, IF ANY |
|---------|-----------------|----------------|--------------------|--------------------|
| U.S.    | 09/701,933      | 27 August 1998 |                    |                    |
| U.S.    | 08/920,630      | 27 August 1987 |                    |                    |
|         |                 |                |                    |                    |
|         |                 |                |                    |                    |
|         |                 |                |                    |                    |

| 2. PARTY        | APPLICATION NO. | FILING DATE    | PATENT NO., IF ANY | ISSUE DATE, IF ANY |
|-----------------|-----------------|----------------|--------------------|--------------------|
| Anderson et al. | 09/368,263      | 03 August 1999 | 6,200,347 B1       | 13 March 2001      |

If application has been patented, have maintenance fees been paid? Yes No X Maintenance Fees not due yetThe claims of this party which correspond to this count are: 1-27. The claims of this party which do not correspond to this count are: None

\*Accorded the benefit of:

| COUNTRY | APPLICATION NO. | FILING DATE | PATENT NO., IF ANY | ISSUE DATE, IF ANY |
|---------|-----------------|-------------|--------------------|--------------------|
| None    |                 |             |                    |                    |

| 3. PARTY | APPLICATION NO. | FILING DATE | PATENT NO., IF ANY | ISSUE DATE, IF ANY |
|----------|-----------------|-------------|--------------------|--------------------|
|          |                 |             |                    |                    |

If application has been patented, have maintenance fees been paid? Yes No Maintenance Fees not due yetThe claims of this party which correspond to this count are: The claims of this party which do not correspond to this count are:

\*Accorded the benefit of:

| COUNTRY | APPLICATION NO. | FILING DATE | PATENT NO., IF ANY | ISSUE DATE, IF ANY |
|---------|-----------------|-------------|--------------------|--------------------|
|         |                 |             |                    |                    |

**Instructions**

1. For every patent involved in the interference, check if the maintenance fees have been paid by using the Patent Number with PALM screen 2970. If fees are due and they have not been paid, the Interference cannot be declared since it would involve an expired patent (35 U.S.C. §135(a), 37 C.F.R. §1.606)
2. For each party, identify the patentable (or patented) and unpatentable (pending) claims which correspond to the count (37 C.F.R. §1.60(f), (n); §1.609(b)(2)).
3. For each party, identify the patentable (or patented) and unpatentable (pending) claims which do not correspond to the count of (37 C.F.R. §1.609(b)(3)).
4. Forward all files including those the benefit of which is being accorded.
5. Keep a copy of the Interference Initial Memorandum and any attachments for your records.

**All Information Requested Below Must Be Attached On (a) Separate Typewritten Sheet(s).**

6. On a separate sheet, set forth a single proposed interference count. If any claim or any party is exactly the same word for word as this count, please indicate the party, application or patent number, and the claim number.

|      |   |                |          |
|------|---|----------------|----------|
| DATE | PRIMARY EXAMINER<br>(signature)           | TELEPHONE NO.: | ART UNIT |
| DATE | GROUP DIRECTOR<br>SIGNATURE (if required) |                |          |

\* The application number and filing date of each application the benefit of which is intended to be accorded must be listed. It is not sufficient to merely list the earliest.

Count 1

6. Anderson et al.'s claims 1-27 in the alternative

or

Grooms et al.'s claims 59-110 in the alternative.

Docket No. 197319US

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF:

Jamie M. Grooms et al.

: GROUP ART UNIT: 3732 (Anticipated)

SERIAL NO: 09/905,683

: EXAMINER: M. Priddy (Anticipated)

FILED: 16 July 2001

:

FOR: CORTICAL BONE CERVICAL  
SMITH-ROBINSON FUSION  
IMPLANT

37 CFR 1.607 REQUEST FOR AN  
INTERFERENCE WITH A PATENT

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

I. 37 CFR 1.607(a)(1)

The patent is U.S. patent No. 6,200,347 B1 issued March 13, 2001 and naming Billy G. Anderson and Lloyd Wolfinbarger, Jr. as inventors. The assignee at issue was LifeNet of Virginia Beach, VA (US).

II. 37 CFR 1.607(a)(2)

Applicants propose the following count, which is in the format approved by the Commissioner in Orikasa v. Oonishi, 10 USPQ2d 1996, 2003 (Comm'r 1990), and Davis v. Uke, 27 USPQ2d 1180, 1188 (Comm'r 1993):

Claims 1-27 in the Anderson et al. patent

RECEIVED  
JAN 30 2002  
103-700 MAIL ROOM  
FEB 5 2002

OR

Claims 59-110 in the Grooms et al. application.

An extra copy of the proposed count is submitted herewith for the examiner's use in filling out the form PTO-850. In addition, as explained in Section IX of this request, a proposed form PTO-850 is submitted herewith for the examiner's convenience.

III. 37 CFR 1.607(a)(3)

All 27 claims in the Anderson et al. patent correspond to the proposed count. Indeed, the proposed count includes all the claims in that patent.

IV. 37 CFR 1.607(a)(4)

Claims 59-110 presented in the 37 CFR 1.607(a)(4) amendment submitted herewith correspond to the proposed count. Indeed, the proposed count includes all of the claims in that group of claims.

V. 37 CFR 1.607(a)(5)

The terms of the application claims identified as corresponding to the proposed count and not previously in the application can be applied to the disclosure of the application as shown by the inserts in bold below as follows:

59. A composite bone graft {page 18 lines 18-20}, comprising:

a first cortical bone portion comprising one or more cortical bone planks {Fig. 7; items 711A and 711B}, and having a first face comprising protrusions {Fig. 7 pins protrude from item 711A; page 18 line 27-page 19 line 6};

a second cortical bone portion comprising one or more cortical bone planks {Fig. 7, item 711B}, and having a second face comprising depressions {Fig. 7 holes for pins in item 711A in item 711B} complimentary to said protrusions provided on said first face, said second cortical bone portion is provided on said first cortical bone portion such that said first face and said second face interlock to form a graft unit {Fig. 7 items 711A and 711B}; and

a cortical bone locking pin located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B; page 18 line 27-page 19 line 6}, said cortical bone locking pin partially traverses said graft unit, wherein said composite bone graft does not comprise an adhesive.

60. A composite bone graft {page 18 lines 18-20}, comprising:

a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7, item 711B};  
one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portion, wherein said composite bone graft does not comprise an adhesive.

61. A composite bone graft {page 18 lines 18-20}, consisting essentially of:
  - a first substantially planer cortical bone portion {Fig. 7 item 711A};
  - a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B};
  - one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion; and
  - a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions.
62. A composite bone graft {page 18 lines 18-20}, comprising:
  - two or more distinct, adjacent, cortical bone portions {Fig. 7 items 711A and 711B}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {Fig. 7 pins project from item 711A into depressions (i.e., holes) in item 711B}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}, wherein said composite bone graft does not comprise an adhesive.

63. A composite bone graft {page 18 lines 18-20}, consisting essentially of:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions in item 711B**};

one or more locking pins comprising cortical bone, partially or entirely traversing a dimension of said composite bone graft {page 18 line 27-page 19 line 6}, said one or more locking pins provided perpendicular to or parallel to an interface between adjacent bone portions {**Fig. 7 items 711A and 711B**}, and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}.

64. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an

adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions in item 711B**};

one or more locking pins comprising cortical bone {page 18 line 27-page 19 line 6}, partially or entirely traversing a dimension of said composite bone graft, said one or more locking pins provided perpendicular to or parallel to an interface between adjacent bone portions {**Fig. 7 items 711A and 711B**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of said adjacent bone portions {**Fig. 7 items 711A and 711B**}, wherein said composite bone graft does not comprise an adhesive.

65. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, bone portions layered to form a graft unit {**Fig. 7 items 711A and 711B**}; one or more biocompatible mechanical connectors provided perpendicular to an interface between adjacent bone portions {**Fig. 7 items 711A and 711B; page 18 line 27-page 19 line 6**}; and a first chamfered edge {**Figs. 1D-E item 115**} and a second chamfered edge {**Figs. 1D-E item 115**}, said first chamfered edge provided along a length of said composite bone graft at its top edge {**Figs. 1C-D**}, and said second chamfered edge provided along a length of said composite bone graft at its bottom edge {**Figs. 1C-D**}, such that the chamfered edges are diametrically opposed {**Fig. 1C item 115**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of portions adjacent bone portion {**Fig. 7 items 711A and 711B**}, wherein said composite bone graft does not comprise an adhesive.

66. A composite bone graft {page 18 lines 18-20}, comprising:

    a first cortical bone portion {**Fig. 7 item 711A**};

    a second cortical bone portion provided on said first cortical bone portion to form a graft unit {**Fig. 7 item 711B**};

    one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first cortical bone portion and said second cortical bone portion {**Fig. 7 items 711A and 711B**}; and

    a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}, wherein said composite bone graft does not comprise an adhesive.

67. The composite bone graft of claim 66, said first cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711A**}, and said second cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711B**}.

68. The composite bone graft of claim 67, said first cortical bone portion comprises a first face comprising a protrusion and said second cortical bone portion comprises a second face comprising a depression complimentary to said first face, such that said first face and said second face interlock {page 18 line 27-page 19 line 6} wherein said composite bone graft does not comprise an adhesive.
69. The composite bone graft of claim 68, said one or more biocompatible mechanical connectors comprise a single cortical bone pin {page 18 line 27-page 19 line 6}.
70. The composite bone graft of claim 69, said cortical bone pin comprises a locking pin {page 18 line 27-page 19 line 6}, said locking pin partially traverses said graft unit and is located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B}.
71. The composite bone graft of any one of claims 60, 62, 64, 65, or 66, said composite bone graft further comprising a first top surface and a second bottom surface, said first top surface and said second bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B; Fig. 1D-E item 120}.
72. A composite cervical wedge {page 3 lines 7-8}, comprising:  
a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B}, said graft unit having a top

textured surface and a bottom textured surface {Figs. 1D-E item 120; Fig. 7 items 711A and 711B};

one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 lines 8-17}; a second width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 lines 8-17}; a composite anterior height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 lines 8-17}; a composite posterior height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 lines 8-17}; and a diameter of from about 7 mm-14 mm {page 6 line 1-2; claim 1}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {Fig. 7 items 711A and 711B}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B}, and wherein said composite bone graft does not comprise an adhesive.

73. A composite cervical block {page 3 lines 7-8}, comprising:

a first substantially planer cortical bone portion {**Fig. 7 item 711A**};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {**Fig. 7 item 711B**}, said graft unit having a top textured surface and a bottom textured surface {**Figs. 1D-E item 120; Fig. 7 items 711A and 711B**};

one or more biocompatible mechanical connectors for holding together said graft unit {**page 18 line 27-page 19 line 6**}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {**Fig. 7 items 711A and 711B**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {**page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6**}; a second width of from about 7 mm-14 mm {**page 6 lines 1-2; Figs 6A-I; page 18 line 27-page 19 line 6**}; a composite height of from about 7 mm-14 mm {**page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6**}; and a diameter of from about 7 mm-14 mm {**page 6 lines 1-2; claim 1**}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {**Fig. 7 items 711A and 711B**}, said top textured surface and said bottom textured surface comprises a plurality of

protrusions defining a saw-tooth pattern {Figs. 1D-E item 120; Fig. 7 items 711A and 711B}, and wherein said composite bone graft does not comprise an adhesive.

74. The composite bone graft of any one of claims 60, 62, 64-66, 72, or 73, further comprising osteoinductive substances provided in said through-hole {page 3 lines 4-7; page 24 lines 8-16}, said osteoinductive substances are selected from the group consisting of demineralized bone and bone marrow cancellous bone {page 24 lines 12-13}.

75. The composite bone graft of claim 74, said osteoinductive substances further comprising one or more members selected from the group consisting of bone morphogenic protein and a growth factor {page 19 lines 12-17 and page 24 lines 8-16}.

76. The composite bone graft of claim 75, said through-hole has a diameter of from about 2.0 mm to about 8.0 mm {Figs. 6A and 6D; page 6 lines 1-2}.

77. The composite bone graft of any one of claims 59, 60, 62, 64-66, 72, or 73, said bone portions comprising allogenic bone {page 3 lines 4-5}.

78. The composite bone graft of claim 65, said two or more distinct, adjacent, bone portions comprise one or more members selected from the group consisting of cortical bone and cancellous bone {page 4 lines 23-24 and page 6 line 28-page 7 line 3}.

79. The composite bone graft of claim 78, said cortical bone and said cancellous bone, comprising allogenic bone {page 3 lines 4-5}.

80. The composite bone graft of claim 65, said composite bone graft further comprising a top surface; a bottom surface; a diameter of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6; claim 1}; a width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6}; an anterior composite height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6}; and a posterior composite height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6}.
81. The composite bone graft of claim 80, said top surface and said bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {Figs. 1D-E item 120; Figs. 7 items 711A and 711B}.
82. The composite bone graft of any one of claims 73 or 81, said plurality of protrusions having a height of about 4 mm {Figs. 5C-5E; Fig. 6C; page 17 line 10-page 18 line 7}.
83. The composite bone graft of any one of claims 60, 61, 66, 72, or 73, said first cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711A; page 18 line 18-page 19 line 17}, and said second cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711B; page 18 line 20-page 19 line 17}.
84. The composite bone graft of any one of claims 62-64 or 65, each of said cortical bone portions comprises one or more cortical bone planks {Fig. 7 items 711A and 711B; page 18 line 20-page 19 line 17}.

85. The composite bone graft of claim 71, said plurality of protrusions having a height of about 4 mm {**Figs. 5C-5E; Fig. 6C; page 17 line 10-page 18 line 7**}.

86. A composite bone graft {page 18 lines 18-20}, comprising:

a first cortical bone portion comprising one or more cortical bone planks {**Fig. 7; items 711A and 711B**}, and having a first face comprising protrusions {**Fig. 7 pins protrude from item 711A; page 18 line 27-page 19 line 6**};

a second cortical bone portion comprising one or more cortical bone planks {**Fig. 7, item 711B**}, and having a second face comprising depressions {**Fig. 7 holes for pins in item 711A in item 711B**} complimentary to said protrusions provided on said first face, said second cortical bone portion is provided on said first cortical bone portion such that said first face and said second face interlock to form a graft unit {**Fig. 7 items 711A and 711B**}; and

a cortical bone locking pin located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {**Fig. 7 items 711A and 711B; page 18 line 27-page 19 line 6**}, said cortical bone locking pin partially traverses said graft unit.

87. A composite bone graft {page 18 lines 18-20}, comprising:

a first substantially planer cortical bone portion {**Fig. 7 item 711A**};

a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {**Fig. 7, item 711B**};

one or more biocompatible mechanical connectors for holding together said graft unit {**page 18 line 27-page 19 line 6**}, said one or more biocompatible mechanical connectors are

provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portion.

88. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions (i.e., holes) in item 711B**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}.

89. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to

provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions in item 711B**};

one or more locking pins comprising cortical bone {page 18 line 27-page 19 line 6}, partially or entirely traversing a dimension of said composite bone graft, said one or more locking pins provided perpendicular to or parallel to an interface between adjacent bone portions {**Fig. 7 items 711A and 711B**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of said adjacent bone portions {**Fig. 7 items 711A and 711B**}.

90. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, bone portions layered to form a graft unit {**Fig. 7 items 711A and 711B**}; one or more biocompatible mechanical connectors provided perpendicular to an interface between adjacent bone portions {**Fig. 7 items 711A and 711B; page 18 line 27-page 19 line 6**}; and a first chamfered edge {**Figs. 1D-E item 115**} and a second chamfered edge {**Figs. 1D-E item 115**}, said first chamfered edge provided along a length of said composite bone graft at its top edge {**Figs. 1C-D**}, and said second chamfered edge provided along a length of said composite bone graft at its bottom edge {**Figs. 1C-D**}, such that the chamfered edges are diametrically opposed {**Fig. 1C item 115**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of portions adjacent bone portion {**Fig. 7 items 711A and 711B**}.

91. A composite bone graft {page 18 lines 18-20}, comprising:
- a first cortical bone portion {Fig. 7 item 711A};
  - a second cortical bone portion provided on said first cortical bone portion to form a graft unit {Fig. 7 item 711B};
  - one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B}; and
  - a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {Fig. 7 items 711A and 711B}.
92. The composite bone graft of claim 91, said first cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711A}, and said second cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711B}.
93. The composite bone graft of claim 92, said first cortical bone portion comprises a first face comprising a protrusion and said second cortical bone portion comprises a second face comprising a depression complimentary to said first face, such that said first face and said second face interlock {page 18 line 27-page 19 line 6} wherein said composite bone graft does not comprise an adhesive.

94. The composite bone graft of claim 93, said one or more biocompatible mechanical connectors comprise a single cortical bone pin {page 18 line 27-page 19 line 6}.
95. The composite bone graft of claim 94, said cortical bone pin comprises a locking pin {page 18 line 27-page 19 line 6}, said locking pin partially traverses said graft unit and is located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B}.
96. The composite bone graft of any one of claims 87, 88, 89, 90, or 91, said composite bone graft further comprising a first top surface and a second bottom surface, said first top surface and said second bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B; Fig. 1D-E item 120}.
97. A composite cervical wedge {page 3 lines 7-8}, comprising:  
a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B}, said graft unit having a top textured surface and a bottom textured surface {Figs. 1D-E item 120; Fig. 7 items 711A and 711B};  
one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone

portion and said second substantially planer cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 lines 8-17}; a second width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 lines 8-17}; a composite anterior height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 lines 8-17}; a composite posterior height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 lines 8-17}; and a diameter of from about 7 mm-14 mm {page 6 line 1-2; claim 1}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {Fig. 7 items 711A and 711B}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B}.

98. A composite cervical block {page 3 lines 7-8}, comprising:

a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B}, said graft unit having a top textured surface and a bottom textured surface {Figs. 1D-E item 120; Fig. 7 items 711A and 711B};

one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {Fig. 7 items 711A and 711B}, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6}; a second width of from about 7 mm-14 mm {page 6 lines 1-2; Figs 6A-I; page 18 line 27-page 19 line 6}; a composite height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6}; and a diameter of from about 7 mm-14 mm {page 6 lines 1-2; claim 1}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {Fig. 7 items 711A and 711B}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {Figs. 1D-E item 120; Fig. 7 items 711A and 711B}.

99. The composite bone graft of any one of claims 87-91, 97, or 98, further comprising osteoinductive substances provided in said through-hole {page 3 lines 4-7; page 24 lines 8-16}, said osteoinductive substances are selected from the group consisting of demineralized bone and bone marrow cancellous bone {page 24 lines 12-13}.

100. The composite bone graft of claim 99, said osteoinductive substances further comprising one or more members selected from the group consisting of bone morphogenic protein and a growth factor {page 19 lines 12-17 and page 24 lines 8-16}.

101. The composite bone graft of claim 100, said through-hole has a diameter of from about 2.0 mm to about 8.0 mm {Figs. 6A and 6D; page 6 lines 1-2}.

102. The composite bone graft of any one of claims 86-91, 97, or 98, said bone portions comprising allogenic bone {page 3 lines 4-5}.

103. The composite bone graft of claim 90, said two or more distinct, adjacent, bone portions comprise one or more members selected from the group consisting of cortical bone and cancellous bone {page 4 lines 23-24 and page 6 line 28-page 7 line 3}.

104. The composite bone graft of claim 103, said cortical bone and said cancellous bone, comprising allogenic bone {page 3 lines 4-5}.

105. The composite bone graft of claim 90, said composite bone graft further comprising a top surface; a bottom surface; a diameter of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6; claim 1}; a width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6}; an anterior composite height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6}; and a posterior composite height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6}.

106. The composite bone graft of claim 105, said top surface and said bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {**Figs. 1D-E item 120; Figs. 7 items 711A and 711B**}.
107. The composite bone graft of any one of claims 98 or 106, said plurality of protrusions having a height of about 4 mm {**Figs. 5C-5E; Fig. 6C; page 17 line 10-page 18 line 7**}.
108. The composite bone graft of any one of claims 61, 87, 91, 97, or 98, said first cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711A; page 18 line 18-page 19 line 17**}, and said second cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711B; page 18 line 20-page 19 line 17**}.
109. The composite bone graft of any one of claims 63, 88, 89, or 90, each of said cortical bone portions comprises one or more cortical bone planks {**Fig. 7 items 711A and 711B; page 18 line 20-page 19 line 17**}.
110. The composite bone graft of claim 96, said plurality of protrusions having a height of about 4 mm {**Figs. 5C-5E; Fig. 6C; page 17 line 10-page 18 line 7**}.

VI. 37 CFR 1.607(a)(6)

37 CFR 1.607(a)(6) is irrelevant since this request and the accompanying 37 CFR 1.607(a)(4) amendment are being submitted prior to one year from the date on which the Anderson et al. patent was granted.

**VII. REQUEST FOR THE BENEFIT OF THE FILING DATES  
OF APPLICANTS' PRIORITY APPLICATIONS**

Applicants claim priority under 35 USC 120 of application serial Nos. 08/920,630 filed 27 August 1997 and 09/701,933 (PCT/US98/17769) filed 27 August 1998.

Applicants are entitled to the benefit of the filing date of any of their earlier filed applications if the count reads on at least one adequately disclosed embodiment in the earlier application.<sup>1</sup> Assuming that the examiner recommends to the board applicants' proposed count, applicants clearly meet that standard. That this is so is demonstrated from the fact that this application is a continuation from application serial No. 09/701,933, which in turn is a continuation-in-part of application serial No. 08/920,630. Applicants' earlier filed application serial No. 09/701,933 is a 35 USC 371 U.S. national stage application based on international application PCT/US98/17769 filed 27 August 1998. Pursuant to 35 USC 363, the filing date of application serial No. 09/701,933 is the same as the filing date of international application PCT/US98/17769 -- namely, 27 August 1998. The PCT application was published as WO 99/09914 on 04 March 1999.

**A. THE WO 99/09914 DISCLOSURE**

The terms of application claims 59-110 corresponding to the proposed count can be applied to the disclosure of applications 09/701,933 and PCT/US98/17769 as published in WO 99/09914 as shown by the inserts in bold below as follows:

59. A composite bone graft {page 16 lines 13-15}, comprising:

---

<sup>1</sup>Weil v. Fritz, 572 F.2d 856, 865-66 n.16, 196 USPQ 600, 608 n.16 (CCPA 1978).

a first cortical bone portion comprising one or more cortical bone planks {Fig. 7; items 711A and 711B}, and having a first face comprising protrusions {Fig. 7 pins protrude from item 711A; page 16 lines 23-30};

a second cortical bone portion comprising one or more cortical bone planks {Fig. 7, item 711B}, and having a second face comprising depressions {Fig. 7 holes for pins in item 711A in item 711B} complimentary to said protrusions provided on said first face, said second cortical bone portion is provided on said first cortical bone portion such that said first face and said second face interlock to form a graft unit {Fig. 7 items 711A and 711B}; and

a cortical bone locking pin located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B; page 16 lines 23-30}, said cortical bone locking pin partially traverses said graft unit, wherein said composite bone graft does not comprise an adhesive.

60. A composite bone graft {page 16 lines 13-15}, comprising:

a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7, item 711B};  
one or more biocompatible mechanical connectors for holding together said graft unit {page 16 lines 23-30}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portion, wherein said composite bone graft does not comprise an adhesive.

61. A composite bone graft {page 16 lines 13-15}, consisting essentially of:
  - a first substantially planer cortical bone portion {Fig. 7 item 711A};
  - a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B};
  - one or more biocompatible mechanical connectors for holding together said graft unit {page 16 lines 23-30}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion; and
  - a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions.
62. A composite bone graft {page 16 lines 13-15}, comprising:
  - two or more distinct, adjacent, cortical bone portions {Fig. 7 items 711A and 711B}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {Fig. 7 pins project from item 711A into depressions (i.e., holes) in item 711B}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}, wherein said composite bone graft does not comprise an adhesive.

63. A composite bone graft {page 16 lines 13-15}, consisting essentially of:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions in item 711B**};

one or more locking pins comprising cortical bone, partially or entirely traversing a dimension of said composite bone graft {page 16 lines 23-30}, said one or more locking pins provided perpendicular to or parallel to an interface between adjacent bone portions {**Fig. 7 items 711A and 711B**}, and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}.

64. A composite bone graft {page 16 lines 13-15}, comprising:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an

adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions in item 711B**};

one or more locking pins comprising cortical bone {page 16 lines 23-30}, partially or entirely traversing a dimension of said composite bone graft, said one or more locking pins provided perpendicular to or parallel to an interface between adjacent bone portions {**Fig. 7 items 711A and 711B**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of said adjacent bone portions {**Fig. 7 items 711A and 711B**}, wherein said composite bone graft does not comprise an adhesive.

65. A composite bone graft {page 16 lines 13-15}, comprising:

two or more distinct, adjacent, bone portions layered to form a graft unit {**Fig. 7 items 711A and 711B**}; one or more biocompatible mechanical connectors provided perpendicular to an interface between adjacent bone portions {**Fig. 7 items 711A and 711B; page 16 lines 23-30**}; and a first chamfered edge {**Figs. 1D-E item 115**} and a second chamfered edge {**Figs. 1D-E item 115**}, said first chamfered edge provided along a length of said composite bone graft at its top edge {**Figs. 1C-D**}, and said second chamfered edge provided along a length of said composite bone graft at its bottom edge {**Figs. 1C-D**}, such that the chamfered edges are diametrically opposed {**Fig. 1C item 115**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of portions adjacent bone portion {**Fig. 7 items 711A and 711B**}, wherein said composite bone graft does not comprise an adhesive.

66. A composite bone graft {page 16 lines 13-15}, comprising:

a first cortical bone portion {**Fig. 7 item 711A**};  
a second cortical bone portion provided on said first cortical bone portion to form a graft unit {**Fig. 7 item 711B**};  
one or more biocompatible mechanical connectors for holding together said graft unit {page 16 lines 23-30}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first cortical bone portion and said second cortical bone portion {**Fig. 7 items 711A and 711B**}; and  
a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}, wherein said composite bone graft does not comprise an adhesive.

67. The composite bone graft of claim 66, said first cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711A**}, and said second cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711B**}.

68. The composite bone graft of claim 67, said first cortical bone portion comprises a first face comprising a protrusion and said second cortical bone portion comprises a second face comprising a depression complimentary to said first face, such that said first face and said second face interlock {page 16 lines 23-30} wherein said composite bone graft does not comprise an adhesive.

69. The composite bone graft of claim 68, said one or more biocompatible mechanical connectors comprise a single cortical bone pin {page 16 lines 23-30}.

70. The composite bone graft of claim 69, said cortical bone pin comprises a locking pin {page 16 lines 23-30}, said locking pin partially traverses said graft unit and is located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B}.

71. The composite bone graft of any one of claims 60, 62, 64, 65, or 66, said composite bone graft further comprising a first top surface and a second bottom surface, said first top surface and said second bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B; Fig. 1D-E item 120}.

72. A composite cervical wedge {page 2 lines 24-25}, comprising:  
a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B}, said graft unit having a top

textured surface and a bottom textured surface {Figs. 1D-E item 120; Fig. 7 items 711A and 711B};

one or more biocompatible mechanical connectors for holding together said graft unit {page 16 lines 23-30}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {page 5 lines 6-8; Figs. 6A-I; page 16 lines 3-12}; a second width of from about 7 mm-14 mm {page 5 lines 6-8; Figs. 6A-I; page 16 lines 3-12}; a composite anterior height of from about 7 mm-14 mm {page 5 lines 1-3; Figs. 6A-I; page 16 lines 3-12}; a composite posterior height of from about 7 mm-14 mm {page 5 lines 1-3; Figs. 6A-I; page 16 lines 3-12}; and a diameter of from about 7 mm-14 mm {page 5 line 6-8; claim 1}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {Fig. 7 items 711A and 711B}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B}, and wherein said composite bone graft does not comprise an adhesive.

73. A composite cervical block {page 2 lines 24-25}, comprising:

a first substantially planer cortical bone portion {Fig. 7 item 711A};

a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {**Fig. 7 item 711B**}, said graft unit having a top textured surface and a bottom textured surface {**Figs. 1D-E item 120; Fig. 7 items 711A and 711B**};

one or more biocompatible mechanical connectors for holding together said graft unit {**page 16 lines 23-30**}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {**Fig. 7 items 711A and 711B**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {**page 5 lines 6-8; Figs. 6A-I; page 16 lines 23-30**}; a second width of from about 7 mm-14 mm {**page 5 lines 6-8; Figs 6A-I; page 16 lines 23-30**}; a composite height of from about 7 mm-14 mm {**page 5 lines 1-3; Figs. 6A-I; page 16 lines 23-30**}; and a diameter of from about 7 mm-14 mm {**page 5 lines 6-8; claim 1**}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {**Fig. 7 items 711A and 711B**}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {**Figs. 1D-E item 120; Fig. 7 items 711A and 711B**}, and wherein said composite bone graft does not comprise an adhesive.

74. The composite bone graft of any one of claims 60, 62, 64-66, 72, or 73, further comprising osteoinductive substances provided in said through-hole {page 2 lines 20-24; page 21 line 18-page 22 line 6}, said osteoinductive substances are selected from the group consisting of demineralized bone and bone marrow cancellous bone {page 22 lines 3-5}.

75. The composite bone graft of claim 74, said osteoinductive substances further comprising one or more members selected from the group consisting of bone morphogenic protein and a growth factor {page 17 lines 4-8 and page 21 line 18-page 22 line 6}.

76. The composite bone graft of claim 75, said through-hole has a diameter of from about 2.0 mm to about 8.0 mm {Figs. 6A and 6D; page 5 lines 6-8}.

77. The composite bone graft of any one of claims 59, 60, 62, 64-66, 72, or 73, said bone portions comprising allogenic bone {page 2 lines 20-21}.

78. The composite bone graft of claim 65, said two or more distinct, adjacent, bone portions comprise one or more members selected from the group consisting of cortical bone and cancellous bone {page 4 lines 3-4 and page 6 lines 2-5}.

79. The composite bone graft of claim 78, said cortical bone and said cancellous bone, comprising allogenic bone {page 2 lines 20-21}.

80. The composite bone graft of claim 65, said composite bone graft further comprising a top surface; a bottom surface; a diameter of from about 7 mm-14 mm {page 5 lines 6-8; Figs. 6A-I; page 16 lines 23-30; claim 1}; a width of from about 7 mm-14 mm {page 5 lines 6-8; Figs. 6A-

I; page 16 lines 23-30}; an anterior composite height of from about 7 mm-14 mm {page 5 lines 1-3; Figs. 6A-I; page 16 lines 23-30}; and a posterior composite height of from about 7 mm-14 mm {page 5 lines 1-3; Figs. 6A-I; page 16 lines 23-30}.

81. The composite bone graft of claim 80, said top surface and said bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {Figs. 1D-E item 120; Figs. 7 items 711A and 711B}.

82. The composite bone graft of any one of claims 73 or 81, said plurality of protrusions having a height of about 4 mm {Figs. 5C-5E; Fig. 6C; page 15 line 7-page 16 line 2}.

83. The composite bone graft of any one of claims 60, 61, 66, 72, or 73, said first cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711A; page 16 line 13-page 17 line 9}, and said second cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711B; page 17 lines 2-21}.

84. The composite bone graft of any one of claims 62-64 or 65, each of said cortical bone portions comprises one or more cortical bone planks {Fig. 7 items 711A and 711B; page 16 line 13-page 17 line 9}.

85. The composite bone graft of claim 71, said plurality of protrusions having a height of about 4 mm {Figs. 5C-5E; Fig. 6C; page 15 line 7-page 16 line 2}.

86. A composite bone graft {page 18 lines 18-20}, comprising:

a first cortical bone portion comprising one or more cortical bone planks {Fig. 7; items 711A and 711B}, and having a first face comprising protrusions {Fig. 7 pins protrude from item 711A; page 18 line 27-page 19 line 6};

a second cortical bone portion comprising one or more cortical bone planks {Fig. 7, item 711B}, and having a second face comprising depressions {Fig. 7 holes for pins in item 711A in item 711B} complimentary to said protrusions provided on said first face, said second cortical bone portion is provided on said first cortical bone portion such that said first face and said second face interlock to form a graft unit {Fig. 7 items 711A and 711B}; and

a cortical bone locking pin located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B; page 18 line 27-page 19 line 6}, said cortical bone locking pin partially traverses said graft unit.

87. A composite bone graft {page 18 lines 18-20}, comprising:

a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7, item 711B};  
one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portion.

88. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions (i.e., holes) in item 711B**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}.

89. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions in item 711B**};

one or more locking pins comprising cortical bone {page 18 line 27-page 19 line 6}, partially or entirely traversing a dimension of said composite bone graft, said one or more locking pins provided perpendicular to or parallel to an interface between adjacent bone portions

{Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of said adjacent bone portions {Fig. 7 items 711A and 711B}.

90. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, bone portions layered to form a graft unit {Fig. 7 items 711A and 711B}; one or more biocompatible mechanical connectors provided perpendicular to an interface between adjacent bone portions {Fig. 7 items 711A and 711B; page 18 line 27-page 19 line 6}; and a first chamfered edge {Figs. 1D-E item 115} and a second chamfered edge {Figs. 1D-E item 115}, said first chamfered edge provided along a length of said composite bone graft at its top edge {Figs. 1C-D}, and said second chamfered edge provided along a length of said composite bone graft at its bottom edge {Figs. 1C-D}, such that the chamfered edges are diametrically opposed {Fig. 1C item 115}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of portions adjacent bone portion {Fig. 7 items 711A and 711B}.

91. A composite bone graft {page 18 lines 18-20}, comprising:

a first cortical bone portion {Fig. 7 item 711A};

a second cortical bone portion provided on said first cortical bone portion to form a graft unit {Fig. 7 item 711B};

one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {Fig. 7 items 711A and 711B}.

92. The composite bone graft of claim 91, said first cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711A}, and said second cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711B}.

93. The composite bone graft of claim 92, said first cortical bone portion comprises a first face comprising a protrusion and said second cortical bone portion comprises a second face comprising a depression complimentary to said first face, such that said first face and said second face interlock {page 18 line 27-page 19 line 6} wherein said composite bone graft does not comprise an adhesive.

94. The composite bone graft of claim 93, said one or more biocompatible mechanical connectors comprise a single cortical bone pin {page 18 line 27-page 19 line 6}.

95. The composite bone graft of claim 94, said cortical bone pin comprises a locking pin {page 18 line 27-page 19 line 6}, said locking pin partially traverses said graft unit and is located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B}.

96. The composite bone graft of any one of claims 87, 88, 89, 90, or 91, said composite bone graft further comprising a first top surface and a second bottom surface, said first top surface and said second bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B; Fig. 1D-E item 120}.

97. A composite cervical wedge {page 3 lines 7-8}, comprising:  
a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B}, said graft unit having a top textured surface and a bottom textured surface {Figs. 1D-E item 120; Fig. 7 items 711A and 711B};  
one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {**page 6 lines 1-2; Figs. 6A-I; page 18 lines 8-17**}; a second width of from about 7 mm-14 mm {**page 6 lines 1-2; Figs. 6A-I; page 18 lines 8-17**}; a composite anterior height of from about 7 mm-14 mm {**page 5 lines 24-27; Figs. 6A-I; page 18 lines 8-17**}; a composite posterior height of from about 7 mm-14 mm {**page 5 lines 24-27; Figs. 6A-I; page 18 lines 8-17**}; and a diameter of from about 7 mm-14 mm {**page 6 line 1-2; claim 1**}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {**Fig. 7 items 711A and 711B**}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {**Fig. 7 items 711A and 711B**}.

98. A composite cervical block {**page 3 lines 7-8**}, comprising:

a first substantially planer cortical bone portion {**Fig. 7 item 711A**};

a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {**Fig. 7 item 711B**}, said graft unit having a top textured surface and a bottom textured surface {**Figs. 1D-E item 120; Fig. 7 items 711A and 711B**};

one or more biocompatible mechanical connectors for holding together said graft unit {**page 18 line 27-page 19 line 6**}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone

portion and said second substantially planer cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {Fig. 7 items 711A and 711B}, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6}; a second width of from about 7 mm-14 mm {page 6 lines 1-2; Figs 6A-I; page 18 line 27-page 19 line 6}; a composite height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6}; and a diameter of from about 7 mm-14 mm {page 6 lines 1-2; claim 1}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {Fig. 7 items 711A and 711B}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {Figs. 1D-E item 120; Fig. 7 items 711A and 711B}.

99. The composite bone graft of any one of claims 87-91, 97, or 98, further comprising osteoinductive substances provided in said through-hole {page 3 lines 4-7; page 24 lines 8-16}, said osteoinductive substances are selected from the group consisting of demineralized bone and bone marrow cancellous bone {page 24 lines 12-13}.

100. The composite bone graft of claim 99, said osteoinductive substances further comprising one or more members selected from the group consisting of bone morphogenic protein and a growth factor {page 19 lines 12-17 and page 24 lines 8-16}.

101. The composite bone graft of claim 100, said through-hole has a diameter of from about 2.0 mm to about 8.0 mm {**Figs. 6A and 6D; page 6 lines 1-2**}.
102. The composite bone graft of any one of claims 86-91, 97, or 98, said bone portions comprising allogenic bone {**page 3 lines 4-5**}.
103. The composite bone graft of claim 90, said two or more distinct, adjacent, bone portions comprise one or more members selected from the group consisting of cortical bone and cancellous bone {**page 4 lines 23-24 and page 6 line 28-page 7 line 3**}.
104. The composite bone graft of claim 103, said cortical bone and said cancellous bone, comprising allogenic bone {**page 3 lines 4-5**}.
105. The composite bone graft of claim 90, said composite bone graft further comprising a top surface; a bottom surface; a diameter of from about 7 mm-14 mm {**page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6; claim 1**}; a width of from about 7 mm-14 mm {**page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6**}; an anterior composite height of from about 7 mm-14 mm {**page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6**}; and a posterior composite height of from about 7 mm-14 mm {**page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6**}.
106. The composite bone graft of claim 105, said top surface and said bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {**Figs. 1D-E item 120; Figs. 7 items 711A and 711B**}.

107. The composite bone graft of any one of claims 98 or 106, said plurality of protrusions having a height of about 4 mm {**Figs. 5C-5E; Fig. 6C; page 17 line 10-page 18 line 7**}.

108. The composite bone graft of any one of claims 61, 87, 91, 97, or 98, said first cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711A; page 18 line 18-page 19 line 17**}, and said second cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711B; page 18 line 20-page 19 line 17**}.

109. The composite bone graft of any one of claims 63, 88, 89, or 90, each of said cortical bone portions comprises one or more cortical bone planks {**Fig. 7 items 711A and 711B; page 18 line 20-page 19 line 17**}.

110. The composite bone graft of claim 96, said plurality of protrusions having a height of about 4 mm {**Figs. 5C-5E; Fig. 6C; page 17 line 10-page 18 line 7**}.

#### B. APPLICATION SERIAL NO. 08/920,630 DISCLOSURE

The terms of application claims 59-110 corresponding to the proposed count can be applied to the disclosure of application serial No. 08/920,630 as shown by the inserts in bold below as follows:

59. A composite bone graft {**page 16 line 29-page 17 line 2**}, comprising:  
a first cortical bone portion comprising one or more cortical bone planks {**Fig. 7; items 711A and 711B**}, and having a first face comprising protrusions {**Fig. 7 pins protrude from item 711A; page 17 lines 10-17**};

a second cortical bone portion comprising one or more cortical bone planks {Fig. 7, item 711B}, and having a second face comprising depressions {Fig. 7 holes for pins in item 711A in item 711B} complimentary to said protrusions provided on said first face, said second cortical bone portion is provided on said first cortical bone portion such that said first face and said second face interlock to form a graft unit {Fig. 7 items 711A and 711B}; and

a cortical bone locking pin located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B; page 17 lines 10-17}, said cortical bone locking pin partially traverses said graft unit, wherein said composite bone graft does not comprise an adhesive.

60. A composite bone graft {page 16 line 29-page 17 line 2}, comprising:
- a first substantially planer cortical bone portion {Fig. 7 item 711A};
- a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7, item 711B};
- one or more biocompatible mechanical connectors for holding together said graft unit {page 17 lines 10-17}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion; and
- a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portion, wherein said composite bone graft does not comprise an adhesive.

61. A composite bone graft {page 16 line 29-page 17 line 2}, consisting essentially of:

a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B};  
one or more biocompatible mechanical connectors for holding together said graft unit {page 17 lines 10-17}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion; and  
a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions.

62. A composite bone graft {page 16 line 29-page 17 line 2}, comprising:  
two or more distinct, adjacent, cortical bone portions {Fig. 7 items 711A and 711B}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {Fig. 7 pins project from item 711A into depressions (i.e., holes) in item 711B}; and  
a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {Fig. 7 items 711A and 711B}, wherein said composite bone graft does not comprise an adhesive.

63. A composite bone graft {page 16 line 29-page 17 line 2}, consisting essentially of:  
two or more distinct, adjacent, cortical bone portions {Fig. 7 items 711A and 711B}, said  
distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an  
adjacent cortical bone portion, each face comprising projections or depressions, such that  
adjacent faces are complimentary, and a single projection interlocks with a single depression, to  
provide an interlocking fit between said adjacent bone portions {Fig. 7 pins project from item  
**711A into depressions in item 711B};  
one or more locking pins comprising cortical bone, partially or entirely traversing a  
dimension of said composite bone graft {page 17 lines 10-17}, said one or more locking pins  
provided perpendicular to or parallel to an interface between adjacent bone portions {Fig. 7 items  
**711A and 711B}, and  
a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104; Fig.  
7 items 711A and 711B}, said through-hole is disposed substantially perpendicular to interfaces  
of adjacent bone portions {Fig. 7 items 711A and 711B}.****
64. A composite bone graft {page 16 line 29-page 17 line 2}, comprising:  
two or more distinct, adjacent, cortical bone portions {Fig. 7 items 711A and 711B}, said  
distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an  
adjacent cortical bone portion, each face comprising projections or depressions, such that  
adjacent faces are complimentary, and a single projection interlocks with a single depression, to  
provide an interlocking fit between said adjacent bone portions {Fig. 7 pins project from item  
**711A into depressions in item 711B};**

one or more locking pins comprising cortical bone {page 17 lines 10-17}, partially or entirely traversing a dimension of said composite bone graft, said one or more locking pins provided perpendicular to or parallel to an interface between adjacent bone portions {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of said adjacent bone portions {Fig. 7 items 711A and 711B}, wherein said composite bone graft does not comprise an adhesive.

65. A composite bone graft {page 16 line 29-page 17 line 2}, comprising:

two or more distinct, adjacent, bone portions layered to form a graft unit {Fig. 7 items 711A and 711B}; one or more biocompatible mechanical connectors provided perpendicular to an interface between adjacent bone portions {Fig. 7 items 711A and 711B; page 17 lines 10-17}; and a first chamfered edge {Figs. 1D-E item 115} and a second chamfered edge {Figs. 1D-E item 115}, said first chamfered edge provided along a length of said composite bone graft at its top edge {Figs. 1C-D}, and said second chamfered edge provided along a length of said composite bone graft at its bottom edge {Figs. 1C-D}, such that the chamfered edges are diametrically opposed {Fig. 1C item 115}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of portions adjacent bone portion {Fig. 7 items 711A and 711B}, wherein said composite bone graft does not comprise an adhesive.

66. A composite bone graft {page 16 line 29-page 17 line 2}, comprising:
- a first cortical bone portion {Fig. 7 item 711A};
  - a second cortical bone portion provided on said first cortical bone portion to form a graft unit {Fig. 7 item 711B};
  - one or more biocompatible mechanical connectors for holding together said graft unit {page 17 lines 10-17}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B}; and
  - a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {Fig. 7 items 711A and 711B}, wherein said composite bone graft does not comprise an adhesive.
67. The composite bone graft of claim 66, said first cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711A}, and said second cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711B}.
68. The composite bone graft of claim 67, said first cortical bone portion comprises a first face comprising a protrusion and said second cortical bone portion comprises a second face comprising a depression complimentary to said first face, such that said first face and said second face interlock {page 17 lines 10-17} wherein said composite bone graft does not comprise an adhesive.

69. The composite bone graft of claim 68, said one or more biocompatible mechanical connectors comprise a single cortical bone pin {page 17 lines 10-17}.
70. The composite bone graft of claim 69, said cortical bone pin comprises a locking pin {page 17 lines 10-17}, said locking pin partially traverses said graft unit and is located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B}.
71. The composite bone graft of any one of claims 60, 62, 64, 65, or 66, said composite bone graft further comprising a first top surface and a second bottom surface, said first top surface and said second bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B; Fig. 1D-E item 120}.
72. A composite cervical wedge {page 2 lines 23-25}, comprising:  
a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B}, said graft unit having a top textured surface and a bottom textured surface {Figs. 1D-E item 120; Fig. 7 items 711A and 711B};  
one or more biocompatible mechanical connectors for holding together said graft unit {page 17 lines 10-17}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions, forming said composite cervical wedge, said composite cervical wedge comprises:  
a first width of from about 7 mm-14 mm {**page 5 lines 6-8; Figs. 6A-I; page 16 lines 19-28**}; a second width of from about 7 mm-14 mm {**page 5 lines 6-8; Figs. 6A-I; page 16 lines 19-28**}; a composite anterior height of from about 7 mm-14 mm {**page 5 lines 1-3; Figs. 6A-I; page 16 lines 19-28**}; a composite posterior height of from about 7 mm-14 mm {**page 5 lines 1-3 Figs. 6A-I; page 16 lines 19-28**}; and a diameter of from about 7 mm-14 mm {**page 5 line 6-8; claim 1**}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {**Fig. 7 items 711A and 711B**}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {**Fig. 7 items 711A and 711B**}, and wherein said composite bone graft does not comprise an adhesive.

73. A composite cervical block {**page 2 lines 23-25**}, comprising:  
a first substantially planer cortical bone portion {**Fig. 7 item 711A**};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {**Fig. 7 item 711B**}, said graft unit having a top textured surface and a bottom textured surface {**Figs. 1D-E item 120; Fig. 7 items 711A and 711B**};  
one or more biocompatible mechanical connectors for holding together said graft unit {**page 17 lines 10-17**}, said one or more biocompatible mechanical connectors are provided

perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {**Fig. 7 items 711A and 711B**}; and a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {**page 5 lines 6-8; Figs. 6A-I; page 16 lines 19-28**}; a second width of from about 7 mm-14 mm {**page 5 lines 6-8; Figs 6A-I; page 16 lines 19-28**}; a composite height of from about 7 mm-14 mm {**page 5 lines 1-3; Figs. 6A-I; page 16 lines 19-28**}; and a diameter of from about 7 mm-14 mm {**page 5 lines 6-8; claim 1**}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {**Fig. 7 items 711A and 711B**}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {**Figs. 1D-E item 120; Fig. 7 items 711A and 711B**}, and wherein said composite bone graft does not comprise an adhesive.

74. The composite bone graft of any one of claims 60, 62, 64-66, 72, or 73, further comprising osteoinductive substances provided in said through-hole {**page 2 lines 21-23; page 18 lines 21-27**}, said osteoinductive substances are selected from the group consisting of demineralized bone and bone marrow cancellous bone {**page 18 lines 23-25**}.

75. The composite bone graft of claim 74, said osteoinductive substances further comprising one or more members selected from the group consisting of bone morphogenic protein and a growth factor {page 18 line 26}.

76. The composite bone graft of claim 75, said through-hole has a diameter of from about 2.0 mm to about 8.0 mm {Figs. 6A and 6D; page 5 lines 6-8}.

77. The composite bone graft of any one of claims 59, 60, 62, 64-66, 72, or 73, said bone portions comprising allogenic bone {page 2 lines 21-22}.

78. The composite bone graft of claim 65, said two or more distinct, adjacent, bone portions comprise one or more members selected from the group consisting of cortical bone and cancellous bone {page 3 line 29-page 4 line 1 and page 5 lines 26-29}.

79. The composite bone graft of claim 78, said cortical bone and said cancellous bone, comprising allogenic bone {page 2 lines 21-22}.

80. The composite bone graft of claim 65, said composite bone graft further comprising a top surface; a bottom surface; a diameter of from about 7 mm-14 mm {page 5 lines 6-8; Figs. 6A-I; page 16 lines 19-28; claim 1}; a width of from about 7 mm-14 mm {page 5 lines 6-8; Figs. 6A-I; page 16 lines 19-28}; an anterior composite height of from about 7 mm-14 mm {page 5 lines 1-3; Figs. 6A-I; page 16 lines 19-28}; and a posterior composite height of from about 7 mm-14 mm {page 5 lines 1-3; Figs. 6A-I; page 16 lines 19-28}.

81. The composite bone graft of claim 80, said top surface and said bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {**Figs. 1D-E item 120; Figs. 7 items 711A and 711B**}.
82. The composite bone graft of any one of claims 73 or 81, said plurality of protrusions having a height of about 4 mm {**Figs. 5C-5E; Fig. 6C; page 15 line 21-page 16 line 18**}.
83. The composite bone graft of any one of claims 60, 61, 66, 72, or 73, said first cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711A; page 17 lines 2-21**}, and said second cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711B; page 17 lines 2-21**}.
84. The composite bone graft of any one of claims 62-64 or 65, each of said cortical bone portions comprises one or more cortical bone planks {**Fig. 7 items 711A and 711B; page 17 lines 2-21**}.
85. The composite bone graft of claim 71, said plurality of protrusions having a height of about 4 mm {**Figs. 5C-5E; Fig. 6C; page 15 line 21-page 16 line 18**}.
86. A composite bone graft {**page 18 lines 18-20**}, comprising:
- a first cortical bone portion comprising one or more cortical bone planks {**Fig. 7; items 711A and 711B**}, and having a first face comprising protrusions {**Fig. 7 pins protrude from item 711A; page 18 line 27-page 19 line 6**};
- a second cortical bone portion comprising one or more cortical bone planks {**Fig. 7, item 711B**}, and having a second face comprising depressions {**Fig. 7 holes for pins in item 711A in**

item 711B} complimentary to said protrusions provided on said first face, said second cortical bone portion is provided on said first cortical bone portion such that said first face and said second face interlock to form a graft unit {**Fig. 7 items 711A and 711B**}; and

a cortical bone locking pin located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {**Fig. 7 items 711A and 711B; page 18 line 27-page 19 line 6**}, said cortical bone locking pin partially traverses said graft unit.

87. A composite bone graft {page 18 lines 18-20}, comprising:

a first substantially planer cortical bone portion {**Fig. 7 item 711A**};

a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {**Fig. 7, item 711B**};

one or more biocompatible mechanical connectors for holding together said graft unit {**page 18 line 27-page 19 line 6**}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portion.

88. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an

adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions (i.e., holes) in item 711B**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104; Fig. 7 items 711A and 711B**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}.

89. A composite bone graft {page 18 lines 18-20}, comprising:

two or more distinct, adjacent, cortical bone portions {**Fig. 7 items 711A and 711B**}, said distinct, adjacent, cortical bone portions each comprising a face complimentary to a face on an adjacent cortical bone portion, each face comprising projections or depressions, such that adjacent faces are complimentary, and a single projection interlocks with a single depression, to provide an interlocking fit between said adjacent bone portions {**Fig. 7 pins project from item 711A into depressions in item 711B**};

one or more locking pins comprising cortical bone {page 18 line 27-page 19 line 6}, partially or entirely traversing a dimension of said composite bone graft, said one or more locking pins provided perpendicular to or parallel to an interface between adjacent bone portions {**Fig. 7 items 711A and 711B**}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of said adjacent bone portions {**Fig. 7 items 711A and 711B**}.

90. A composite bone graft {page 18 lines 18-20}, comprising:
- two or more distinct, adjacent, bone portions layered to form a graft unit {Fig. 7 items 711A and 711B}; one or more biocompatible mechanical connectors provided perpendicular to an interface between adjacent bone portions {Fig. 7 items 711A and 711B; page 18 line 27-page 19 line 6}; and a first chamfered edge {Figs. 1D-E item 115} and a second chamfered edge {Figs. 1D-E item 115}, said first chamfered edge provided along a length of said composite bone graft at its top edge {Figs. 1C-D}, and said second chamfered edge provided along a length of said composite bone graft at its bottom edge {Figs. 1C-D}, such that the chamfered edges are diametrically opposed {Fig. 1C item 115}; and
- a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of portions adjacent bone portion {Fig. 7 items 711A and 711B}.
91. A composite bone graft {page 18 lines 18-20}, comprising:
- a first cortical bone portion {Fig. 7 item 711A};
- a second cortical bone portion provided on said first cortical bone portion to form a graft unit {Fig. 7 item 711B};
- one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first cortical bone portion and said second cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {**Figs. 1 and 7 item 104**}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {**Fig. 7 items 711A and 711B**}.

92. The composite bone graft of claim 91, said first cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711A**}, and said second cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711B**}.

93. The composite bone graft of claim 92, said first cortical bone portion comprises a first face comprising a protrusion and said second cortical bone portion comprises a second face comprising a depression complimentary to said first face, such that said first face and said second face interlock {**page 18 line 27-page 19 line 6**} wherein said composite bone graft does not comprise an adhesive.

94. The composite bone graft of claim 93, said one or more biocompatible mechanical connectors comprise a single cortical bone pin {**page 18 line 27-page 19 line 6**}.

95. The composite bone graft of claim 94, said cortical bone pin comprises a locking pin {**page 18 line 27-page 19 line 6**}, said locking pin partially traverses said graft unit and is located approximately parallel or perpendicular to the interface of said first cortical bone portion and said second cortical bone portion {**Fig. 7 items 711A and 711B**}.

96. The composite bone graft of any one of claims 87, 88, 89, 90, or 91, said composite bone graft further comprising a first top surface and a second bottom surface, said first top surface and

said second bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B; Fig. 1D-E item 120}.

97. A composite cervical wedge {page 3 lines 7-8}, comprising:

a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B}, said graft unit having a top textured surface and a bottom textured surface {Figs. 1D-E item 120; Fig. 7 items 711A and 711B};

one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 lines 8-17}; a second width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 lines 8-17}; a composite anterior height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 lines 8-17}; a composite posterior height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 lines 8-17}; and a diameter of from about 7 mm-14 mm {page 6 line 1-

**2; claim 1}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {Fig. 7 items 711A and 711B}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {Fig. 7 items 711A and 711B}.**

98. A composite cervical block {page 3 lines 7-8}, comprising:

a first substantially planer cortical bone portion {Fig. 7 item 711A};  
a second substantially planer cortical bone portion provided on said first substantially planer cortical bone portion to form a graft unit {Fig. 7 item 711B}, said graft unit having a top textured surface and a bottom textured surface {Figs. 1D-E item 120; Fig. 7 items 711A and 711B};

one or more biocompatible mechanical connectors for holding together said graft unit {page 18 line 27-page 19 line 6}, said one or more biocompatible mechanical connectors are provided perpendicular to or parallel to an interface of said first substantially planer cortical bone portion and said second substantially planer cortical bone portion {Fig. 7 items 711A and 711B}; and

a through-hole entirely traversing said composite bone graft {Figs. 1 and 7 item 104}, said through-hole is disposed substantially perpendicular to interfaces of adjacent bone portions {Fig. 7 items 711A and 711B}, forming said composite cervical wedge, said composite cervical wedge comprises:

a first width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6}; a second width of from about 7 mm-14 mm {page 6 lines 1-2; Figs 6A-I; page

**18 line 27-page 19 line 6}; a composite height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6}; and a diameter of from about 7 mm-14 mm {page 6 lines 1-2; claim 1}, wherein said top textured surface and said bottom textured surface are opposing and are disposed parallel to interfaces of said bone portions {Fig. 7 items 711A and 711B}, said top textured surface and said bottom textured surface comprises a plurality of protrusions defining a saw-tooth pattern {Figs. 1D-E item 120; Fig. 7 items 711A and 711B}.**

99. The composite bone graft of any one of claims 87-91, 97, or 98, further comprising osteoinductive substances provided in said through-hole {page 3 lines 4-7; page 24 lines 8-16}, said osteoinductive substances are selected from the group consisting of demineralized bone and bone marrow cancellous bone {page 24 lines 12-13}.

100. The composite bone graft of claim 99, said osteoinductive substances further comprising one or more members selected from the group consisting of bone morphogenic protein and a growth factor {page 19 lines 12-17 and page 24 lines 8-16}.

101. The composite bone graft of claim 100, said through-hole has a diameter of from about 2.0 mm to about 8.0 mm {Figs. 6A and 6D; page 6 lines 1-2}.

102. The composite bone graft of any one of claims 86-91, 97, or 98, said bone portions comprising allogenic bone {page 3 lines 4-5}.

103. The composite bone graft of claim 90, said two or more distinct, adjacent, bone portions comprise one or more members selected from the group consisting of cortical bone and cancellous bone {page 4 lines 23-24 and page 6 line 28-page 7 line 3}.

104. The composite bone graft of claim 103, said cortical bone and said cancellous bone, comprising allogenic bone {page 3 lines 4-5}.

105. The composite bone graft of claim 90, said composite bone graft further comprising a top surface; a bottom surface; a diameter of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6; claim 1}; a width of from about 7 mm-14 mm {page 6 lines 1-2; Figs. 6A-I; page 18 line 27-page 19 line 6}; an anterior composite height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6}; and a posterior composite height of from about 7 mm-14 mm {page 5 lines 24-27; Figs. 6A-I; page 18 line 27-page 19 line 6}.

106. The composite bone graft of claim 105, said top surface and said bottom surface comprising a plurality of protrusions defining a saw-tooth pattern {Figs. 1D-E item 120; Figs. 7 items 711A and 711B}.

107. The composite bone graft of any one of claims 98 or 106, said plurality of protrusions having a height of about 4 mm {Figs. 5C-5E; Fig. 6C; page 17 line 10-page 18 line 7}.

108. The composite bone graft of any one of claims 61, 87, 91, 97, or 98, said first cortical bone portion comprises one or more cortical bone planks {Fig. 7 item 711A; page 18 line 18-

page 19 line 17}, and said second cortical bone portion comprises one or more cortical bone planks {**Fig. 7 item 711B; page 18 line 20-page 19 line 17**}.

109. The composite bone graft of any one of claims 63, 88, 89, or 90, each of said cortical bone portions comprises one or more cortical bone planks {**Fig. 7 items 711A and 711B; page 18 line 20-page 19 line 17**}.

110. The composite bone graft of claim 96, said plurality of protrusions having a height of about 4 mm {**Figs. 5C-5E; Fig. 6C; page 17 line 10-page 18 line 7**}.

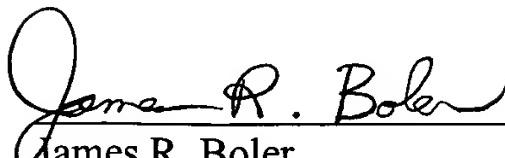
#### VIII. 37 CFR 1.608

37 CFR 1.608 is irrelevant if applicants are accorded the benefit the 27 August 1997 filing date of serial No. 08/920,630 or the 25 August 1998 filing date of serial No. 09/701,933. The filing dates of both of those applications precede the 03 August 1999 filing date of application serial No. 09/368,263 that matured into the Anderson et al. patent. The filing dates of both of those applications also precede the filing dates of the earlier applications cited in column 1 paragraph 1 of the Anderson et al. patent.

#### IX. SUBMISSION OF PROPOSED FORM PTO-850

Submitted herewith for the convenience of the examiner is a proposed form PTO-850.

Respectfully submitted,



James R. Boler

Registration No. 37,058

Attorney of Record

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

1755 Jefferson Davis Highway, 4<sup>th</sup> Floor

Arlington, Virginia 22202

(703) 412-6262 (direct dial)

(703) 413-2220 (facsimile)

JBOLER@OBLON.COM (e-mail)



**22850**

Of Counsel:

Charles L. Gholz, Esq.

Registration No. 26,395

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

1755 Jefferson Davis Highway, 4<sup>th</sup> Floor

Arlington, VA 22202

(703) 412-6485 (direct dial)

(703) 412-2220 (facsimile)

CGHOLZ@OBLON.COM (e-mail)

E:\interference\cases\197319rti\607 Req w-Patent Grooms.wpd